Claims:

1. A display device comprising a plurality of pixels, each pixel comprising:

an optical part;

a digital-to-analog converter for driving said optical part, said digital to analog converter physically co-located with said optical part; and

driving circuitry for providing digital signals simultaneously to respective digital-to-analog converters in said plurality of pixels.

2. The display device of claim 1 wherein said driving circuitry comprises a serial shifter for accepting said digital signals into each said pixel.

3. The display device of claim 2 wherein said serial shifter is physically co-located with said optical part.

4. The display device of claim 2 wherein said driving circuitry comprises a parallel data latch for accepting said digital signals from said serial shifter.

5. The display device of claim 4 wherein said parallel data latch is physically co-located with said optical part.

6. The display device of claim 1 wherein said optical part comprises a light emitter.

7. The display device of claim 6 wherein said light emitter comprises a light emitting diode.

8. The display device of claim 7 wherein said light emitter comprises an organic light emitting diode.

9. The display device of claim 1 wherein said optical part comprises a reflector.

10. The display device of claim 9 wherein said reflector comprises a digital micro-mirror.

11. The display device of claim 9, wherein said reflector comprises a diffractive light device.

12. A display device comprising a plurality of pixels, each pixel in the display comprising:

a serial shifter that accepts a serial bit stream and has an n-bit wide output;

an n-bit wide data latch that latches data received from the output of the serial shifter;

a digital to analog converter to which output of the data latch is applied; and

an optical part driven by the digital to analog converter.

13. The display device of claim 12, wherein each pixel includes a plurality of optical parts.

14. The display device of claim 13, wherein each pixel comprises:

a digital to analog converter for each of said plurality of optical parts;

a data latch corresponding to each optical part; and

a serial shifter corresponding to each optical part.

15. The display device of claim 14, wherein serial shifters in each pixel are arranged to receive data in parallel.

16. The display device of claim 13, wherein each pixel comprises:

a serial shifter corresponding to each optical part;

a data latch corresponding to each optical part;

a single digital to analog converter;

a first switch to selectively and individually apply the output of the pixel's data latches to the single digital to analog converter; and

a second switch to selectively and individually apply the output of the single analog to digital converter to the plurality of optical parts.

17. The display device of claim 16, wherein serial shifters in each pixel are arranged to receive data in parallel.

18. The display device of claim 12, wherein groups in the plurality of pixels comprise interconnected serial shifters to serially receive a data set.

19. The display device of claim 18, further comprising a global clock line to control shifting of data through interconnected serial shifters of groups of pixels in the plurality of pixels.

20. The display device of claim 19, further comprising a global load line to control latching of data by data latches in the plurality of pixels.

21. The display device of claim 12, wherein said optical part comprises a light emitter.

22. The display device of claim 21 wherein said light emitter comprises a light emitting diode.

23. The display device of claim 22 wherein said light emitter comprises an organic light emitting diode.

24. The display device of claim 12 wherein said optical part comprises a reflector.

25. The display device of claim 24 wherein said reflector comprises a digital micro-mirror.

26. The display device of claim 25 wherein said reflector comprises a diffractive light device.

27. The display device of claim 12, wherein outputs of data latches in the plurality of pixels are applied simultaneously to their analog to digital converters in accordance with a global load signal.

28. A method for driving a display device, the method comprising the steps of:

shifting digital data serially into serial shifters of a group of pixels of the display through the serial shifters of the group until each serial shifter in the group includes a byte of data;

simultaneously latching bytes of data from the serial shifters into corresponding data latches in each of the group of pixels;

simultaneously converting bytes of data latched into data latches of the group of pixels into analog signals for driving optical parts in each of the group of pixels; and

producing a display by optical parts in the group of pixels in accordance with the analog signals.

29. The method of claim 28 wherein said step of shifting comprises

providing a sequence of global clock signals to the serial shifters; and

advancing a data set of the digital data by one bit through the serial shifters with each cycle in the sequence of global clock signals.

30. The method of claim 28 wherein said step of simultaneously latching comprises:

providing a global load signal to each data latch,

upon receiving said global load signal, loading a byte of data into each data latch simultaneously from a respective serial shifter while outputting a previously held data byte from each data latch.

31. A display device for displaying a visual image including a plurality of pixels, comprising:

means for shifting data to respective pixels;

means for holding said data in said respective pixels; and

respective digital-to-analog converters in said respective pixels for simultaneously converting said data to respective analog signals.